

Model: D3DC-75 X

Data

Type: Semi-hermetic piston compressors

Producer: Copeland

Series: DISCUS

Model: D3DC-75 X

Technical data

Cylinder count:	3
Displacement [m ³ /h]:	38
Weight [kg]:	161
Oil charge [dm ³]:	3,4
Max. operating current [A]:	14
Locked rotor current [A]:	70
Power supply [V/~/Hz]:	380-420V/3/50Hz

Connections

	<u>milimeters</u>	<u>inches</u>
Suction line:		1 3/8"
Discharge line:		1 1/8"

Model: D3DC-75 X

Capacity

R134a

Cooling capacity [kW]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10
30	8.19	10.79	13.88	17.55	21.87	26.92	32.76
35	7.45	9.94	12.89	16.39	20.50	25.31	30.89
40	6.75	9.12	11.92	15.24	19.14	23.70	29.00
45	6.09	8.33	10.97	14.10	17.78	22.09	27.10
50	5.47	7.57	10.04	12.97	16.42	20.47	25.19
55	4.88	6.84	9.14	11.86	15.07	18.84	23.26
60	4.34	6.15	8.26	10.76	13.72	17.22	21.33

Power input [kW]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10
30	3.34	3.66	3.93	4.14	4.25	4.26	4.15
35	3.48	3.87	4.21	4.49	4.70	4.81	4.80
40	3.62	4.06	4.47	4.83	5.12	5.32	5.42
45	3.74	4.24	4.71	5.14	5.51	5.80	6.00
50	3.86	4.40	4.93	5.42	5.87	6.25	6.54
55	3.96	4.54	5.12	5.68	6.20	6.65	7.03
60	4.05	4.67	5.29	5.90	6.48	7.02	7.48

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Capacity

Current [A]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10
30	7.11	7.50	7.85	8.12	8.27	8.28	8.12
35	7.28	7.76	8.21	8.59	8.88	9.04	9.03
40	7.45	8.01	8.56	9.05	9.46	9.76	9.91
45	7.60	8.24	8.88	9.48	10.02	10.45	10.75
50	7.74	8.46	9.18	9.89	10.54	11.10	11.55
55	7.87	8.65	9.46	10.26	11.02	11.71	12.30
60	7.98	8.82	9.71	10.60	11.47	12.28	13.00

Mass flow [kg/s]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10
30	193.47	250.01	315.11	390.09	476.26	574.93	687.44
35	184.92	241.65	306.77	381.60	467.44	565.62	677.46
40	176.75	233.44	298.35	372.79	458.08	555.53	666.47
45	168.95	225.37	289.83	363.66	448.16	544.66	654.47
50	161.51	217.43	281.22	354.20	437.69	533.00	641.45
55	154.43	209.62	272.51	344.42	426.66	520.56	627.42
60	147.72	201.95	263.70	334.31	415.07	507.32	612.36

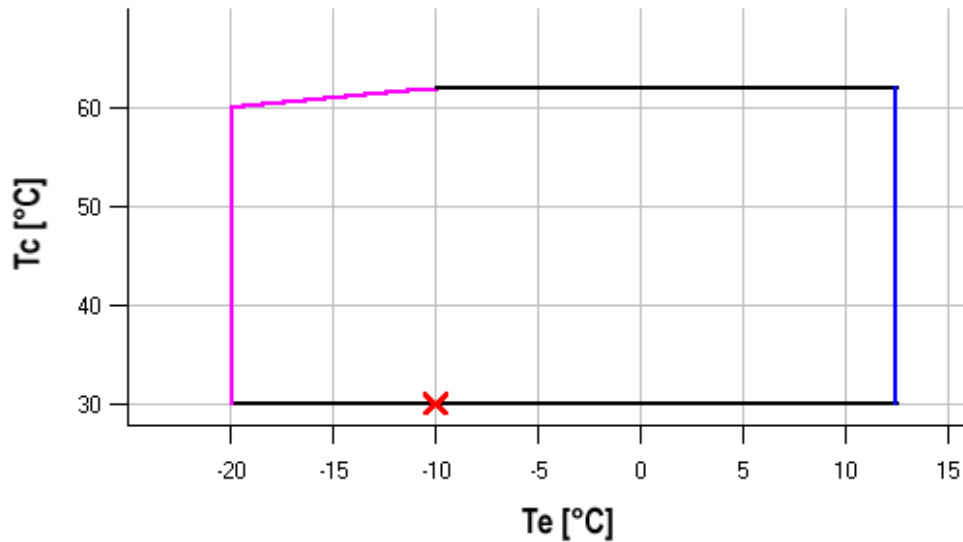
Model: D3DC-75 X

Capacity

C.O.P. [W/W]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10
30	2.45	2.94	3.53	4.24	5.15	6.32	7.90
35	2.14	2.57	3.06	3.65	4.36	5.27	6.43
40	1.87	2.25	2.67	3.16	3.74	4.45	5.35
45	1.63	1.97	2.33	2.74	3.23	3.81	4.52
50	1.42	1.72	2.04	2.39	2.80	3.28	3.85
55	1.23	1.51	1.78	2.09	2.43	2.83	3.31
60	1.07	1.32	1.56	1.82	2.12	2.45	2.85

Application range



- Maximum evaporating temperature
- 25°C suction gas return

Operating conditions: ISO; subcooling: 0 K, suction superheat: 10 K, return gas temperature: -

t_c - Condensing temperature [°C]

t_e - Evaporating temperature [°C]

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Capacity

R404A/R507

Cooling capacity [kW]

$t_c \setminus t_e$	-50	-45	-40	-35	-30	-25	-20
20	3.86	5.35	7.19	9.41	12.06	15.17	18.79
25	3.41	4.83	6.57	8.67	11.16	14.09	17.51
30	2.96	4.31	5.95	7.92	10.26	13.01	16.22
35	2.52	3.79	5.32	7.16	9.35	11.92	14.92
40	-	3.27	4.70	6.41	8.44	10.83	13.63
45	-	2.76	4.08	5.66	7.54	9.75	12.33
50	-	-	3.47	4.92	6.64	8.67	11.04
55	-	-	2.87	4.19	5.75	7.59	9.76

Power input [kW]

$t_c \setminus t_e$	-50	-45	-40	-35	-30	-25	-20
20	2.59	3.10	3.60	4.08	4.54	4.96	5.33
25	2.58	3.14	3.70	4.24	4.76	5.24	5.69
30	2.55	3.16	3.77	4.37	4.95	5.51	6.03
35	2.49	3.15	3.81	4.47	5.12	5.74	6.34
40	-	3.11	3.83	4.54	5.25	5.95	6.62
45	-	3.05	3.81	4.59	5.36	6.13	6.87
50	-	-	3.77	4.61	5.44	6.28	7.10
55	-	-	3.70	4.59	5.49	6.40	7.29

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Capacity

Current [A]

$t_c \setminus t_e$	-50	-45	-40	-35	-30	-25	-20
20	6.38	7.03	7.68	8.34	8.96	9.54	10.04
25	6.37	7.06	7.79	8.53	9.26	9.96	10.60
30	6.33	7.08	7.88	8.71	9.54	10.36	11.14
35	6.27	7.07	7.94	8.85	9.79	10.72	11.64
40	-	7.03	7.96	8.96	9.99	11.05	12.10
45	-	6.94	7.94	9.02	10.16	11.33	12.51
50	-	-	7.87	9.03	10.26	11.55	12.86
55	-	-	7.75	8.98	10.31	11.71	13.15

Mass flow [kg/s]

$t_c \setminus t_e$	-50	-45	-40	-35	-30	-25	-20
20	81.03	115.87	157.36	206.94	266.05	336.13	418.60
25	75.86	110.07	150.90	199.78	258.14	327.44	409.09
30	69.90	103.51	143.69	191.89	249.53	318.07	398.92
35	63.18	96.20	135.77	183.31	240.26	308.05	388.13
40	-	88.18	127.15	174.05	230.33	297.41	376.74
45	-	79.48	117.87	164.16	219.79	286.18	364.78
50	-	-	107.95	153.65	208.65	274.38	352.27
55	-	-	97.42	142.56	196.95	262.03	339.24

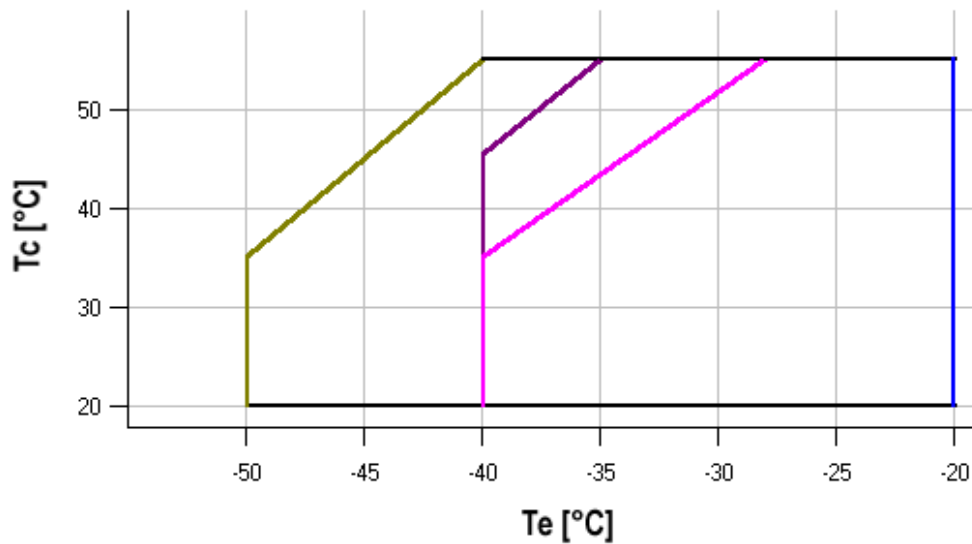
Model: D3DC-75 X





Capacity

C.O.P. [W/W]

$t_c \setminus t_e$	-50	-45	-40	-35	-30	-25	-20
20	1.49	1.73	2.00	2.31	2.66	3.06	3.53
25	1.32	1.54	1.78	2.04	2.35	2.69	3.08
30	1.16	1.36	1.58	1.81	2.07	2.36	2.69
35	1.01	1.20	1.40	1.60	1.83	2.08	2.35
40	-	1.05	1.23	1.41	1.61	1.82	2.06
45	-	0.90	1.07	1.23	1.41	1.59	1.79
50	-	-	0.92	1.07	1.22	1.38	1.56
55	-	-	0.78	0.91	1.05	1.19	1.34

Application range



-  Maximum evaporating temperature
-  25°C suction gas return
-  0°C suction gas return + additional cooling
-  0°C suction gas return

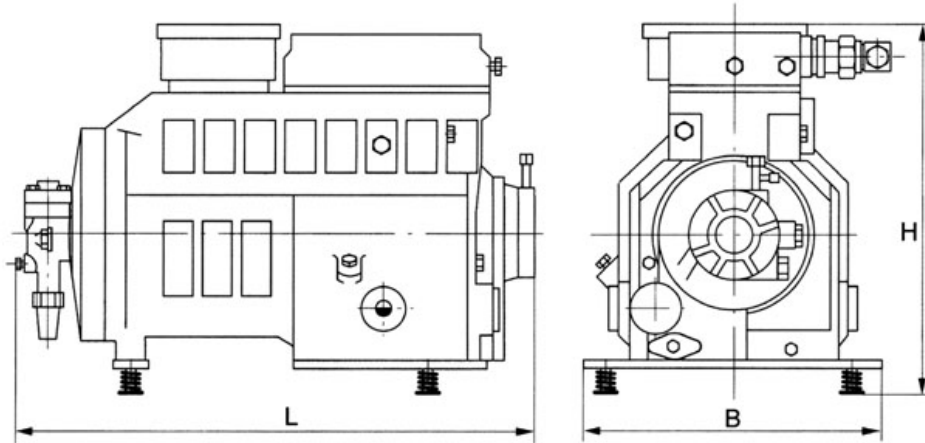
Operating conditions: ISO; subcooling: 0 K, suction superheat: 20 K, return gas temperature: -

t_c - Condensing temperature [°C]

t_e - Evaporating temperature [°C]

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Dimensions



L	655 mm
B	370 mm
H	480 mm

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Image

